

### REMARKS

In response to the Final Office Action mailed April 16, 2004, Applicants submit the following Amendment and Response. Claims 275 and 327 have been amended. Claims 1-274, 309-318, and 361-365 have been canceled. Claims 275-308, 319-360, and 366-372 remain pending. The limitations of dependent claims 315-318 and 361-364 were incorporated into claims 275 and 327, respectively. Therefore, these amendments are made without the addition of new matter.

#### *Art Rejections*

Claims 275-287, 289-290, 292, 297-308, 319-324, 323-325, 327-339, 341-342, 349-360, 365-366, 369-371 were rejected under 35 U.S.C. § 102(b), as being allegedly anticipated by Kool (USP 6,077,668). Claims 288, 291, 340, and 343 were rejected under 35 U.S.C. § 103(a), as being allegedly unpatentable over Kool in view of Zhang et al. (USP 5,876,924). Claim 293 and 345 was rejected under 35 U.S.C. § 103(a), as being allegedly unpatentable over Kool in view of Berninger et al. (USP 5,194,370). Claims 294-296 and 346-348 were rejected under 35 U.S.C. § 103(a), as being allegedly unpatentable over Kool in view of Nelson et al. (Methods in Enzymology, 1979, 68: 41-50). Claims 322, 326, 368, and 372 were rejected under 35 U.S.C. § 103(a), as being allegedly unpatentable over Kool in view of Mannigan et al. (USP 6,399,302).

Applicants gratefully acknowledge the examiner's indication that claims 315-318 and 361-364 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. (See Office Action, page 19, para. 12) Applicants have amended claims 275 and 327 to incorporate the limitations of claims 315-318 and 361-364, respectively. Claims 315-318 and 361-364 specified the linkages between the synthetic binding unit and the

nucleic acid. Applicants have amended claims 275 and 327 to incorporate all of the possible linkages specified in these dependent claims into a Markush group as follows: “wherein when the synthetic binding unit is pRNA or pDNA, the synthetic binding unit and the nucleic acid are connected via a linkage selected from the group consisting of the 2’ end of the synthetic binding unit to the 5’ end of the nucleic acid, 2’ end of the synthetic binding unit to the 3’ end of the nucleic acid, 4’ end of the synthetic binding unit to the 5’ end of the nucleic acid, and 4’ end of the synthetic binding unit to the 3’ end of the nucleic acid.” Applicants respectfully assert that the prior art does not teach or suggest all of the limitations of amended claims 275 and 327, and the claims that depend thereon.

Applicants submit that the claims, as amended, are free of the cited art and are in position for allowance. Please charge Deposit Account No. **50-2862** for the 1-month extension fee and any other fees required by this submission. If the Examiner has any questions regarding this communication, or feels that an interview might facilitate prosecution of the application, he is invited to contact the undersigned at (949) 737-2900.

Respectfully submitted,  
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